

– 21. (Currently Amended) An energy storage microscopic rechargeable battery having internal only chemical reactants, the battery having a volumetric size comprising a micrometer footprint adapted for direct and congruent size integration with microelectromechanical systems and/or microcircuitry to reduce power losses, the microscopic rechargeable battery comprising ~~internal only~~ etched spaced electrodes of reactant material comprising microscopically sized footprints as low as 0.001 cm² with an ~~internal only~~ microscopic space containing electrode reaction accommodating electrolyte interposed between the spaced reactant electrodes. --

– 22. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein a microscopic separator associated with the electrolyte is interposed between the microscopic electrodes. --

– 23. (Currently Amended) The microscopic rechargeable battery according to claim 21 wherein the [thin] electrode layers comprise generally flat conductive film –

– 24. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein the microscopic battery is sealed. --

– 25. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein the battery geometry is selected from the group consisting of: (a) flat cell; (b) spirally wound; (c) bipolar; and (d) linear. --

– 26. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein the battery geometry is selected from the groups consisting of: (a) wire-shaped; (b) odd-shaped; (c) wire in a can; and (d) peg in a block. --

– 27. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein at least one electrode comprises a reactant material selected from the group consisting essentially of materials comprising: (a) lead; (b) zinc; (c) nickel; and (d) derivatives thereof [of (a), (b) and (c)]. --

– 28. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein at least one reactant electrode comprises metal selected from the group consisting essentially of materials comprising: (a) a metal hydride; (b) lithium; (c) silver; and (d) copper, and derivatives thereof. --

– 29. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein at least one reactant electrode comprises a material selected from the group consisting essentially of materials comprising: (a) platinum; (b) carbon; (c) cadmium; and (d) lanthanum, and derivatives thereof. --

– 30. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein the reaction accommodating electrolyte is selected from the group consisting essentially of: (a) liquid; [and] (b) solid; and (c) a hybrid of liquid and solid. --

–31. (Previously Presented) The microscopic rechargeable battery according to claim 21 wherein the reaction accommodating electrolyte is selected from the group consisting essentially of: (a) an ion-conducting polymer; (b) lithium glass; and (c) a polymer containing an ionically-conductive material. --

– 32. (Previously Presented) The microscopic rechargeable battery according to claim 30 wherein the liquid reaction accommodating electrolyte comprises an aqueous solution also comprised of potassium hydroxide and/or sulfuric acid. --

– 33. (Currently Amended) An internal electrical energy storage ~~microscopic~~fabricated rechargeable battery comprising a volumetric microscopic size including a micrometric-sized footprint [for] directly size and electronically integrat[ion]ed into a microelectromechanical system or non-microelectromechanical system microcircuit to alleviate power losses, the battery comprising at least one electrical energy storage cell comprised of ~~internal~~ reactants ~~only~~ in the nature of separated internal ~~microscopic~~fabricated electrodes each having a footprint within a range of less than 1 cm² to 0.0001 cm² ~~substantially less than 20 cm²~~ of reactant material etched and patterned in place to define an internal ~~microscopic~~fabricated electrolyte storage space between the etched ~~microscopic~~fabricated electrodes. --

– 34. (Previously Presented) The microscopic rechargeable battery according to claim 33 wherein at least one reactant electrode comprises a thin film of conductive material. --

–35. (Previously Presented) The microscopic rechargeable battery according to claim 33 further comprising a non-conductivity base upon which components of the microscopic battery are carried. --

– 36. (Previously Presented) The microscopic rechargeable battery according to claim 35 wherein the base is selected from the group consisting essentially of: (a) conformal material and (b) rigid material. --

– 37. (Previously Presented) The microscopic rechargeable battery according to claim 33 further comprising a non-reactant electrolyte influent flow path extending through at least one electrode by which liquid electrolyte is introduced into the storage space. --

– 38. (Previously Presented) The microscopic rechargeable battery according to claim 33 wherein the storage space comprises an etched cavity. --

– 39. (Previously Presented) The microscopic rechargeable battery according to claim 33 wherein a separator associated with electrolyte in the storage space prevents contact between the electrodes. --

– 40. (Previously Presented) The microscopic rechargeable battery according to claim 33 wherein the storage space comprises a porous separator carrying reaction accommodating electrolyte. --